

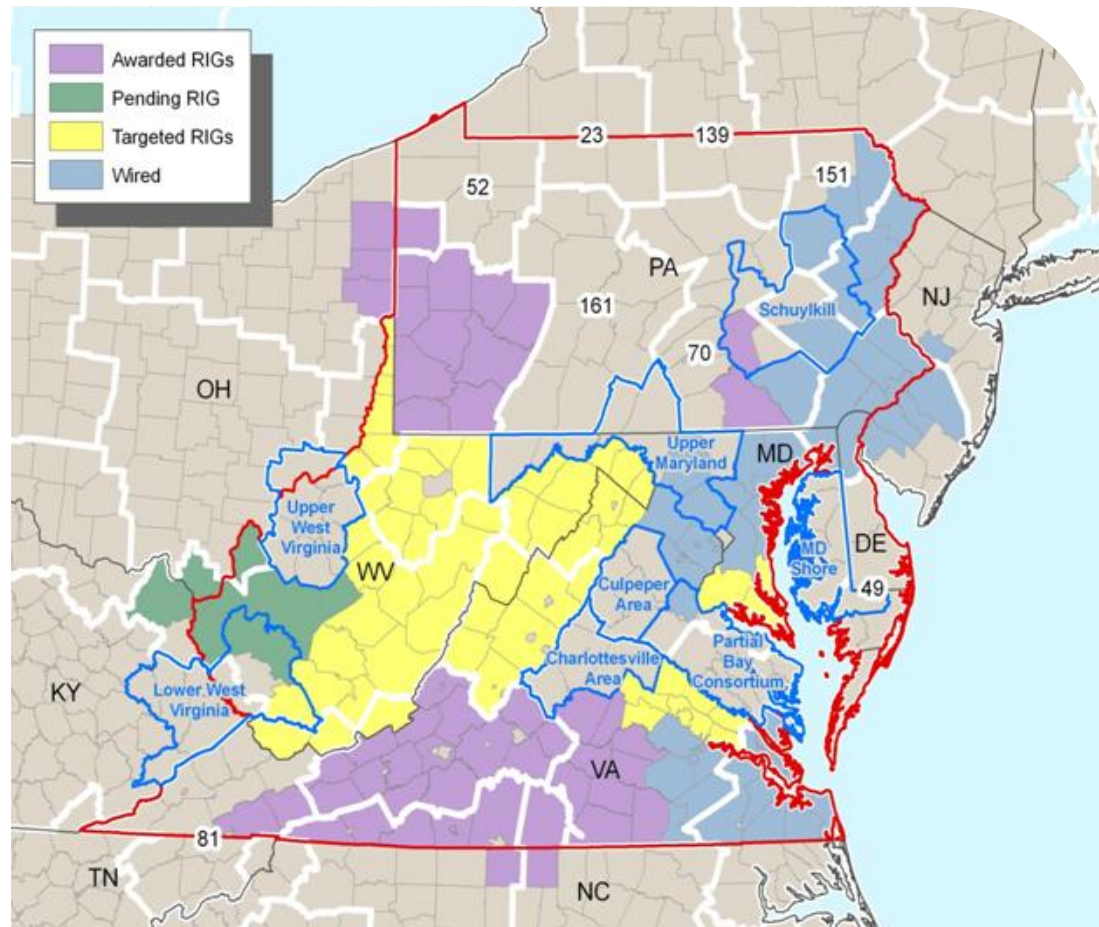


## Analysis of Regions Not Currently Involved in WIRED Grants or RIGs: BEA Region 52

October 2008

### BEA Region 52

Clarion County, Pennsylvania  
Crawford County, Pennsylvania  
Erie County, Pennsylvania  
Forest County, Pennsylvania  
Venango County, Pennsylvania  
Warren County, Pennsylvania





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## About This Report

Chmura Economics & Analytics recognizes that accurate, timely data can be difficult to find. This regional report provides employment, wages, occupations, and skills data that can be used as background for an RIG application.

## Frequently Asked Questions

### What data sources were utilized in the creation of this report?

The data for this report come from a variety of sources. All data are checked, cleaned, combined, organized, and displayed in a way to maximize its usefulness. Yearly employment data in the below charts are based on four-quarter averages. Data for regions outside of Virginia and Ohio are imputed when not disclosed. A few of the sources of data which have been used in the creation of this report are:

- Quarterly Census of Employment and Wages (QCEW)
- Local Area Unemployment Statistics (LAUS)
- Occupation and Industry Forecasts
- Local Employment Dynamics (LED)
- O\*Net
- National Center for Education Statistics
- Occupational Employment Statistics (OES)

### Who is Chmura Economics & Analytics?

Chmura Economics & Analytics (Chmura) is a provider of applied economic consulting, quantitative research, and software solutions requiring the integration of advanced economic analysis. Chmura publishes *Virginia Economic Trends*, *Ohio Economic Trends*, electronic publications, and forecasts available via [www.chmuraecon.com](http://www.chmuraecon.com). Software products include JOBSeq®, WIBeq™, and OnStage.

Chmura has headquarters in Richmond, Virginia and a branch office in Cleveland, Ohio. Chmura Economics & Analytics is committed to achieving 100% customer satisfaction in all project engagements. The Chmura philosophy is that when our customer succeeds, Chmura has been successful. To contact us, send an email to [info@chmuraecon.com](mailto:info@chmuraecon.com).



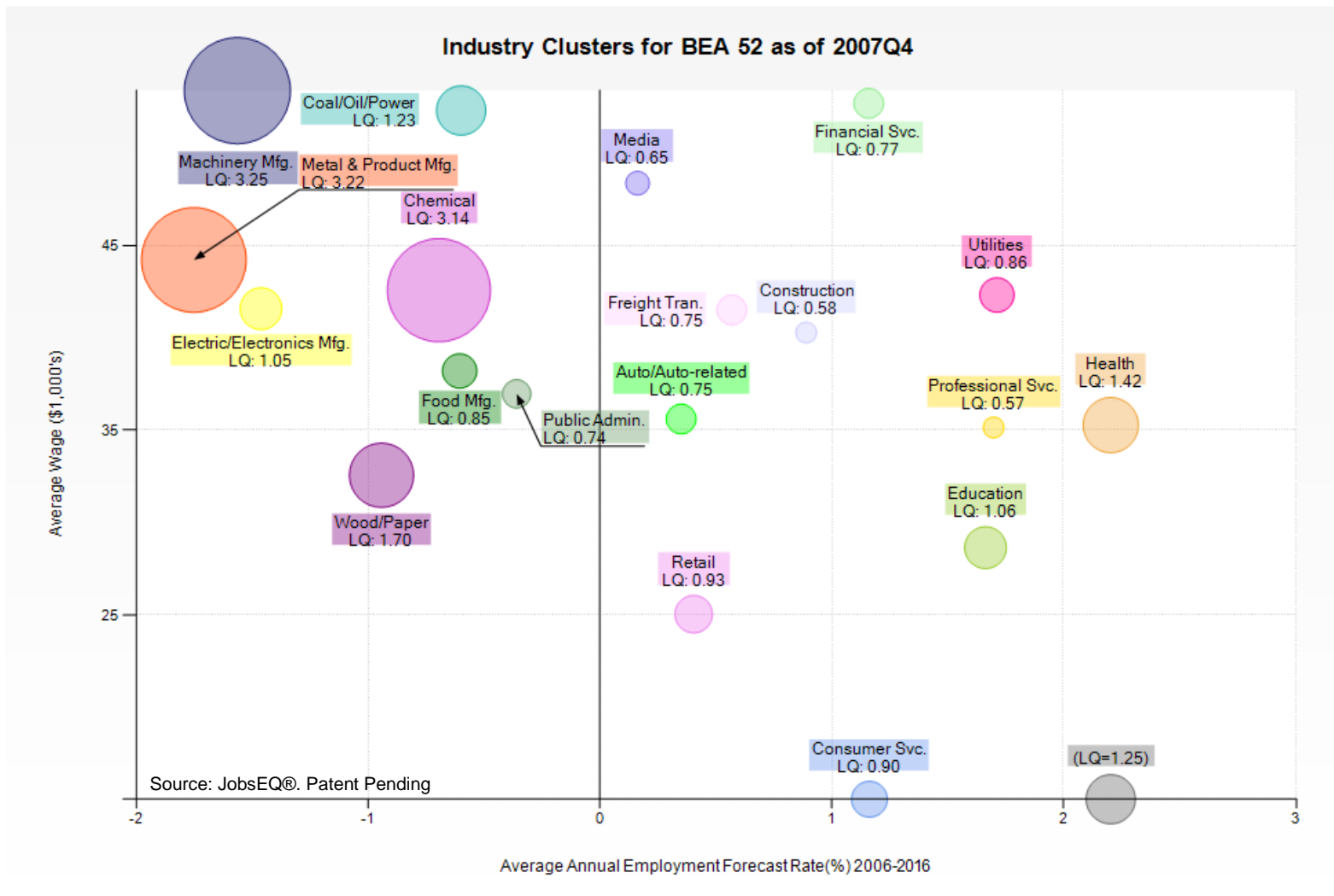
## **Executive Summary**

BEA Region 52 in northwest Pennsylvania is in danger of a continued spiral where so many primary industries such as manufacturing have reduced employment that secondary industries such as retail and education services are shedding jobs.

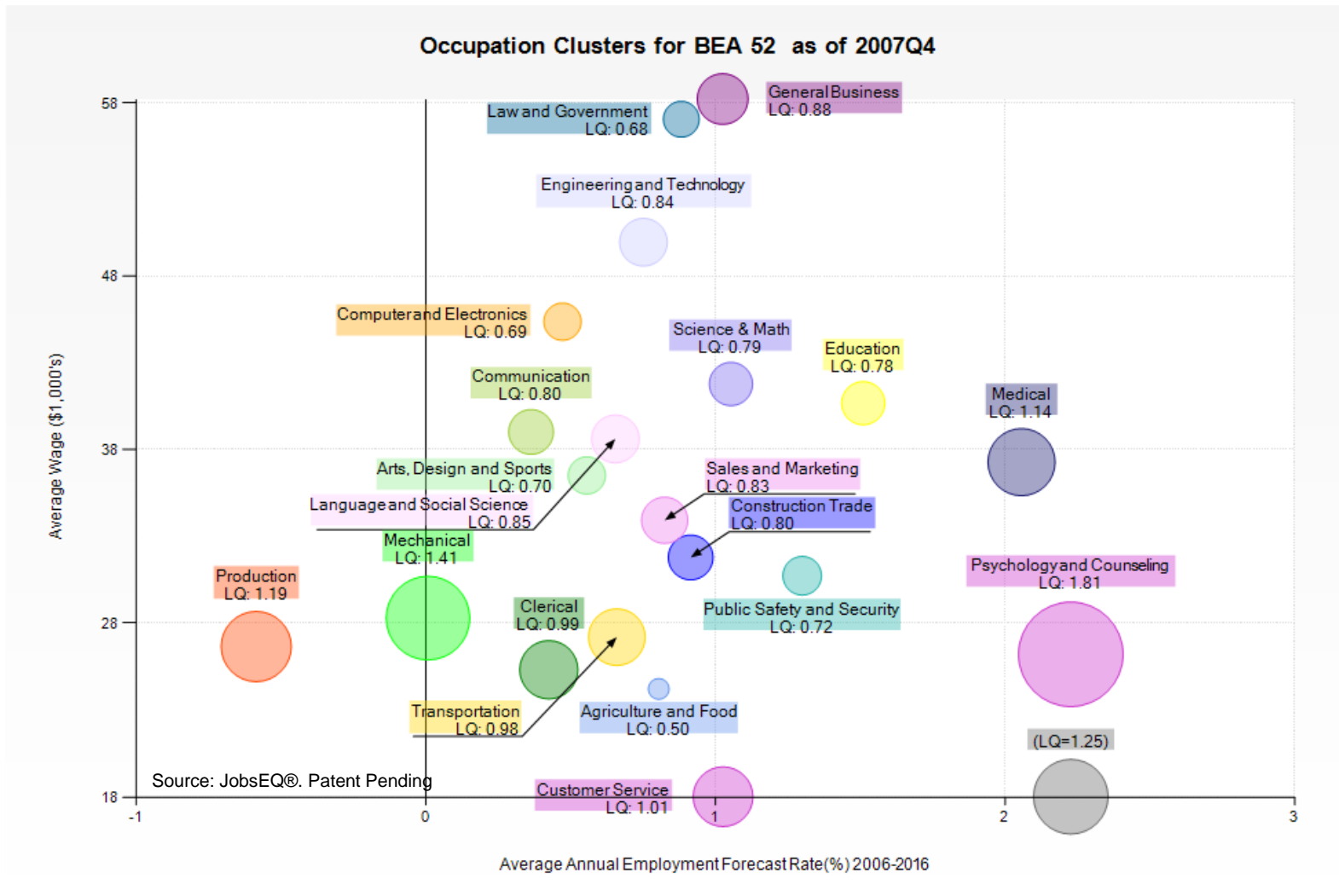
The three largest clusters in the region—machinery, metal, and chemical manufacturing—are all forecast to lose jobs over the next ten years. As a result, significant retraining will be needed for the relatively large mechanical and production occupations. The occupation expected to have the largest deficit over the next seven years is registered nurses.



## Industry and Occupation Clusters



Note: See the appendix for an explanation of how to use industry and occupation cluster charts.





## Employment by Major Sector

Bureau of Economic Analysis Region 52 Employment by Major Sector

NAICS	Industry Description	Employment				Employment Change Since 2005		Annual Average Change Since 2002
		2007	2005	2002	Annual Average Wages 2007	Number	Annual Average	
0	Total	212,518	212,148	210,051	\$ 33,043	370	0.1%	0.2%
11	Agriculture, Forestry, Fishing and Hunting	820	827	895	\$ 22,832	(6)	-0.4%	-1.7%
21	Mining, Quarrying, and Oil and Gas Extraction	1,092	833	749	\$ 49,167	259	14.5%	7.8%
22	Utilities	1,142	1,024	1,224	\$ 64,400	118	5.6%	-1.4%
23	Construction	6,991	6,836	7,227	\$ 40,150	155	1.1%	-0.7%
31	Manufacturing	42,028	43,183	46,278	\$ 45,191	(1,155)	-1.3%	-1.9%
42	Wholesale Trade	5,162	5,276	4,961	\$ 38,871	(113)	-1.1%	0.8%
44	Retail Trade	26,529	27,554	28,624	\$ 22,882	(1,024)	-1.9%	-1.5%
48	Transportation and Warehousing	7,012	7,283	6,002	\$ 37,062	(271)	-1.9%	3.2%
51	Information	3,263	3,558	4,080	\$ 49,884	(295)	-4.2%	-4.4%
52	Finance and Insurance	7,236	7,608	7,070	\$ 51,334	(372)	-2.5%	0.5%
53	Real Estate and Rental and Leasing	1,734	2,003	2,029	\$ 26,502	(270)	-7.0%	-3.1%
54	Professional, Scientific, and Technical Services	4,651	5,218	4,446	\$ 41,468	(567)	-5.6%	0.9%
55	Management of Companies and Enterprises	2,259	1,366	1,057	\$ 64,686	892	28.6%	16.4%
56	Administrative and Support and Waste Management and Remediation Services	9,269	8,904	8,442	\$ 26,426	366	2.0%	1.9%
61	Educational Services	18,529	18,553	17,909	\$ 34,406	(25)	-0.1%	0.7%
62	Health Care and Social Assistance	37,980	35,716	33,308	\$ 35,934	2,264	3.1%	2.7%
71	Arts, Entertainment, and Recreation	3,347	2,716	2,475	\$ 25,729	631	11.0%	6.2%
72	Accommodation and Food Services	17,061	16,906	16,335	\$ 10,618	155	0.5%	0.9%
81	Other Services (except Public Administration)	7,537	8,016	8,021	\$ 17,541	(479)	-3.0%	-1.2%
92	Public Administration	8,749	8,713	8,705	\$ 36,798	36	0.2%	0.1%

Employment growth is the broadest and most timely indicator of the general health of an economy.

Information obtained from this table provides insight to questions such as:

- Which industries are posting the largest increases or decreases in employment? What are their average wages—will the trend lead to a decrease or increase in the region's overall wealth?
- Are changes in employment levels cyclical or is a particularly industry in long-term decline? What is driving that trend?

## Top 20 Employers by 3-Digit NAICS

Bureau of Economic Analysis Region 52 Top 20 Employers by 3-Digit NAICS

NAICS	Industry Description	Employment			Annual Aver Wages 2007	Employment Change Since 2005		Annual Aver Change Since 2002
		2007	2005	2002		Number	Annual Average	
611	Educational Services	18,529	18,553	17,909	\$ 34,406	(25)	-0.1%	0.7%
722	Food Services and Drinking Places	15,336	15,178	14,496	\$ 10,419	158	0.5%	1.1%
622	Hospitals	10,238	10,315	9,958	\$ 40,657	(76)	-0.4%	0.6%
621	Ambulatory Health Care Services	10,189	9,375	8,408	\$ 35,336	814	4.2%	3.9%
623	Nursing and Residential Care Facilities	10,078	10,235	10,271	\$ 31,651	(157)	-0.8%	-0.4%
332	Fabricated Metal Product Manufacturing	8,827	8,570	9,007	\$ 41,416	257	1.5%	-0.4%
561	Administrative and Support Services	8,730	8,355	8,215	\$ 26,043	375	2.2%	1.2%
624	Social Assistance	7,474	5,792	4,676	\$ 36,083	1,681	13.6%	9.8%
452	General Merchandise Stores	6,106	5,885	5,499	\$ 17,014	221	1.9%	2.1%
921	Executive, Legislative, and Other General Government Support	5,923	5,928	6,048	\$ 31,979	(5)	0.0%	-0.4%
333	Machinery Manufacturing	5,866	6,111	6,397	\$ 48,043	(245)	-2.0%	-1.7%
326	Plastics and Rubber Products Manufacturing	5,536	5,876	7,147	\$ 36,944	(340)	-2.9%	-5.0%
336	Transportation Equipment Manufacturing	5,509	5,381	5,081	\$ 70,910	129	1.2%	1.6%
541	Professional, Scientific, and Technical Services	4,651	5,218	4,446	\$ 41,468	(567)	-5.6%	0.9%
445	Food and Beverage Stores	4,486	4,688	5,495	\$ 29,806	(201)	-2.2%	-4.0%
238	Specialty Trade Contractors	4,299	4,155	4,326	\$ 35,185	144	1.7%	-0.1%
524	Insurance Carriers and Related Activities	3,782	4,095	3,609	\$ 58,221	(313)	-3.9%	0.9%
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	3,619	3,594	3,484	\$ 13,086	24	0.3%	0.8%
441	Motor Vehicle and Parts Dealers	3,479	3,752	3,816	\$ 32,936	(273)	-3.7%	-1.8%
423	Merchant Wholesalers, Durable Goods	3,241	3,142	2,828	\$ 38,277	99	1.6%	2.8%

The **North American Industry Classification System** (NAICS) was developed cooperatively between the United States, Canada, and Mexico to provide data users with accurate information pertaining to the economy in the 21st century. The NAICS Code is composed of six digits. The first two digits define the top-level category. The three-digit industries shown above represent components of the major sectors.

Similar to the previous table, information obtained from this table provides insight to questions such as:

- Which industries are posting the largest increases or decreases in employment? What are their average wages—will the trend lead to a decrease or increase in the region's overall wealth?
- Are changes in employment levels cyclical or is a particularly industry in long-term decline? What is driving that trend?



## Industries with Largest Employment Gains and Losses

Bureau of Economic Analysis Region 52 Top 20 Industries with Largest Employment Gain by 3-Digit NAICS

NAICS	Industry Description	Employment			Annual Aver Wages 2007	Employment Change Since 2005		
		2007	2005	2002		Number	Annual Average	Annual Aver Change Since 2002
624	Social Assistance	7,474	5,792	4,676	\$ 36,083	1,681.21	13.6%	9.8%
551	Management of Companies and Enterprises	2,259	1,366	1,057	\$ 64,686	892.15	28.6%	16.4%
621	Ambulatory Health Care Services	10,189	9,375	8,408	\$ 35,336	813.70	4.2%	3.9%
713	Amusement, Gambling, and Recreation Industries	2,707	2,187	2,057	\$ 19,733	519.89	11.3%	5.6%
493	Warehousing and Storage	1,208	768	149	\$ 38,966	440.22	25.4%	52.0%
332	Fabricated Metal Product Manufacturing	8,827	8,570	9,007	\$ 41,416	256.86	1.5%	-0.4%
452	General Merchandise Stores	6,106	5,885	5,499	\$ 17,014	220.83	1.9%	2.1%
444	Building Material and Garden Equipment and Supplies Dealers	1,966	1,782	1,632	\$ 23,343	184.00	5.0%	3.8%
237	Heavy and Civil Engineering Construction	1,075	892	1,035	\$ 63,639	182.45	9.8%	0.8%
722	Food Services and Drinking Places	15,336	15,178	14,496	\$ 10,419	158.07	0.5%	1.1%
213	Support Activities for Mining	349	231	175	\$ 42,524	118.08	22.9%	14.8%
221	Utilities	1,142	1,024	1,224	\$ 64,400	117.71	5.6%	-1.4%
922	Justice, Public Order, and Safety Activities	1,614	1,498	1,402	\$ 49,538	115.86	3.8%	2.9%
485	Transit and Ground Passenger Transportation	1,622	1,511	1,312	\$ 23,656	110.56	3.6%	4.3%
327	Nonmetallic Mineral Product Manufacturing	1,308	1,200	1,261	\$ 49,339	108.45	4.4%	0.7%
211	Oil and Gas Extraction	419	312	322	\$ 60,697	107.63	16.0%	5.4%
711	Performing Arts, Spectator Sports, and Related Industries	453	347	275	\$ 51,646	105.54	14.2%	10.5%
423	Merchant Wholesalers, Durable Goods	3,241	3,142	2,828	\$ 38,277	98.94	1.6%	2.8%
335	Electrical Equipment, Appliance, and Component Manufacturing	689	591	843	\$ 36,203	98.34	8.0%	-4.0%
325	Chemical Manufacturing	1,135	1,059	1,152	\$ 59,357	76.06	3.5%	-0.3%

Information obtained from the table above identifies the industries that are adding the largest number of jobs which translates into those creating the greatest demand for new workers.

## Bureau of Economic Analysis Region 52 Top 20 Industries with Largest Employment Loss by 3-Digit NAICS

NAICS	Industry Description	Employment			Annual Aver Wages 2007	Employment Change Since 2005		Annual Aver Change Since 2002
		2007	2005	2002		Number	Annual Average	
454	Nonstore Retailers	1,244	2,133	2,469	\$ 27,110	(889)	-23.6%	-12.8%
484	Truck Transportation	2,046	2,871	2,333	\$ 40,758	(825)	-15.6%	-2.6%
321	Wood Product Manufacturing	2,766	3,231	2,989	\$ 31,696	(464)	-7.5%	-1.5%
814	Private Households	146	594	838	\$ 16,263	(447)	-50.4%	-29.5%
524	Insurance Carriers and Related Activities	3,782	4,095	3,609	\$ 58,221	(313)	-3.9%	0.9%
441	Motor Vehicle and Parts Dealers	3,479	3,752	3,816	\$ 32,936	(273)	-3.7%	-1.8%
532	Rental and Leasing Services	587	842	833	\$ 26,730	(255)	-16.5%	-6.7%
322	Paper Manufacturing	274	493	803	\$ 36,113	(219)	-25.4%	-19.3%
445	Food and Beverage Stores	4,486	4,688	5,495	\$ 29,806	(201)	-2.2%	-4.0%
236	Construction of Buildings	1,618	1,789	1,866	\$ 37,440	(172)	-4.9%	-2.8%
623	Nursing and Residential Care Facilities	10,078	10,235	10,271	\$ 31,651	(157)	-0.8%	-0.4%
424	Merchant Wholesalers, Nondurable Goods	1,363	1,474	1,482	\$ 37,235	(112)	-3.9%	-1.7%
522	Credit Intermediation and Related Activities	3,054	3,165	3,131	\$ 38,614	(111)	-1.8%	-0.5%
312	Beverage and Tobacco Product Manufacturing	124	230	221	\$ 33,023	(106)	-26.5%	-10.9%
425	Wholesale Electronic Markets and Agents and Brokers	559	659	652	\$ 45,931	(100)	-7.9%	-3.0%
451	Sporting Goods, Hobby, Book, and Music Stores	852	944	866	\$ 13,723	(93)	-5.0%	-0.3%
511	Publishing Industries (except Internet)	869	952	958	\$ 41,861	(83)	-4.4%	-1.9%
923	Administration of Human Resource Programs	78	160	122	\$ 47,944	(82)	-30.2%	-8.6%
324	Petroleum and Coal Products Manufacturing	697	761	669	\$ 47,595	(65)	-4.3%	0.8%
811	Repair and Maintenance	1,735	1,789	1,743	\$ 27,132	(54)	-1.5%	-0.1%

Information obtained from the table above identifies the industries that are shedding the largest number of workers which translates into the number of people who are likely looking for jobs in the region or in need of retraining.

# Declining Occupations

Bureau of Economic Analysis Region 52 Top 20 Declining Occupations Based on Top 20 Declining Industries

Occupation Description	SOC	Employment			Annual Aver Wages 2007	Employment Change Since 2005		Annual Aver Change Since 2002
		2007	2005	2002		Number	Annual Average	
Truck Drivers, Heavy and Tractor-Trailer	53-3032	1,436	1,899	1,600	\$ 31,525	(463)	-13.0%	-2.1%
Customer Service Representatives	43-4051	934	1,141	1,164	\$ 25,086	(207)	-9.5%	-4.3%
Laborers and Freight, Stock, and Material Movers, Hand	53-7062	721	887	838	\$ 20,280	(167)	-9.9%	-3.0%
Cashiers	41-2011	1,865	1,996	2,271	\$ 16,115	(131)	-3.3%	-3.9%
Packers and Packagers, Hand	53-7064	440	568	667	\$ 15,615	(128)	-12.0%	-8.0%
Retail Salespersons	41-2031	1,258	1,371	1,374	\$ 27,511	(113)	-4.2%	-1.7%
Personal and Home Care Aides	39-9021	683	794	806	\$ 16,750	(111)	-7.3%	-3.3%
Stock Clerks and Order Fillers	43-5081	997	1,106	1,279	\$ 18,797	(109)	-5.0%	-4.9%
Order Clerks	43-4151	165	273	320	\$ 22,314	(108)	-22.2%	-12.4%
Child Care Workers	39-9011	325	430	493	\$ 18,461	(104)	-13.0%	-8.0%
Office Clerks, General	43-9061	733	837	818	\$ 20,920	(104)	-6.4%	-2.2%
Industrial Truck and Tractor Operators	53-7051	294	387	355	\$ 24,711	(94)	-12.9%	-3.7%
Carpenters	47-2031	710	800	836	\$ 32,212	(90)	-5.8%	-3.2%
Truck Drivers, Light or Delivery Services	53-3033	598	686	635	\$ 22,028	(89)	-6.7%	-1.2%
General and Operations Mgrs	11-1021	833	915	897	\$ 79,927	(82)	-4.6%	-1.5%
Counter and Rental Clerks	41-2021	273	348	361	\$ 21,963	(75)	-11.4%	-5.4%
Telemarketers	41-9041	120	194	224	\$ 22,279	(74)	-21.4%	-11.7%
Sales Representatives, Wholesale and Mfg, Ex Technical and Scientific Products	41-4012	498	572	557	\$ 47,521	(74)	-6.7%	-2.2%
Mental Health Counselors	21-1014	304	377	422	\$ 25,744	(73)	-10.2%	-6.4%
First-Line Supervisors/Mgrs of Office and Administrative Support Workers	43-1011	588	659	665	\$ 38,307	(72)	-5.6%	-2.5%

The **Standard Occupational Classification** (SOC) system is used by all Federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. All workers are classified into one of over 820 occupations according to their occupational definition. Each occupation group includes detailed occupation(s) requiring similar job duties, skills, education, or experience. This system is provided by the U.S. Department of Labor, Bureau of Labor Statistics.

The table above identifies the most prevalent occupations in the regional industries shedding the most workers over the past year. The occupations on this list identify those that are in need of retraining or transferring to other industries.

## Bureau of Economic Analysis Region 52 Top 20 Declining Occupations Based on All Industries

Occupation Description	SOC	Employment				Employment			Annual Average Change Since 2002 Q4
		2007 Q4	2006 Q4	2002 Q4	Annual Average Wages 2007 Q4	Number	Percent		
Truck Drivers, Heavy and Tractor-Trailer	53-3032	2,543	2,742	2,531	\$ 30,552	(199)	-7.3%	0.1%	
Accountants and Auditors	13-2011	1,048	1,115	1,080	\$ 49,396	(67)	-6.0%	-0.6%	
Nursing Aides, Orderlies, and Attendants	31-1012	2,935	2,984	2,857	\$ 19,195	(49)	-1.6%	0.5%	
Counter and Rental Clerks	41-2021	668	717	731	\$ 19,487	(49)	-6.8%	-1.8%	
Registered Nurses	29-1111	4,715	4,762	4,408	\$ 48,105	(47)	-1.0%	1.4%	
Team Assemblers	51-2092	2,678	2,723	3,089	\$ 23,335	(45)	-1.7%	-2.8%	
Cabinetmakers and Bench Carpenters	51-7011	198	243	339	\$ 24,282	(45)	-18.5%	-10.2%	
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	51-7042	312	354	385	\$ 20,788	(41)	-11.7%	-4.1%	
Laborers and Freight, Stock, and Material Movers, Hand	53-7062	3,079	3,118	3,013	\$ 20,428	(40)	-1.3%	0.4%	
Sales Representatives, Wholesale and Mfg, Except Technical and Scientific Produc	41-4012	1,757	1,790	1,774	\$ 47,682	(33)	-1.9%	-0.2%	
Truck Drivers, Light or Delivery Services	53-3033	1,552	1,583	1,510	\$ 22,118	(31)	-2.0%	0.5%	
Insurance Sales Agents	41-3021	455	485	428	\$ 48,713	(30)	-6.3%	1.2%	
Customer Service Representatives	43-4051	2,595	2,625	2,735	\$ 25,555	(30)	-1.1%	-1.0%	
Industrial Truck and Tractor Operators	53-7051	1,304	1,334	1,136	\$ 25,545	(29)	-2.2%	2.8%	
Mental Health Counselors	21-1014	600	627	618	\$ 29,060	(27)	-4.3%	-0.6%	
Paper Goods Machine Setters, Operators, and Tenders	51-9196	75	101	143	\$ 25,980	(27)	-26.3%	-12.2%	
Construction Laborers	47-2061	935	959	951	\$ 26,408	(24)	-2.5%	-0.3%	
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Met	51-4072	679	703	837	\$ 23,522	(24)	-3.4%	-4.1%	
Bartenders	35-3011	1,533	1,556	1,541	\$ 14,753	(23)	-1.5%	-0.1%	
Helpers--Production Workers	51-9198	1,010	1,033	1,091	\$ 19,904	(23)	-2.2%	-1.5%	

The table above identifies the most prevalent occupations that are declining from ALL industries in the region. The occupations on this list identify those that are in need of retraining or transferring to other industries.

# Growing Occupations

**Bureau of Economic Analysis Region 52 Top 20 Growing Occupations Based on All Industries**

Occupation Description	SOC	Employment				Employment Change		Annual Aver Change Since 2002 Q4
		2007 Q4	2006 Q4	2002 Q4	Annual Aver Wages 2007 Q4	Number	Percent	
Waiters and Waitresses	35-3031	4,076	3,971	4,044	\$ 14,202	105	2.6%	0.2%
Retail Salespersons	41-2031	6,330	6,251	6,484	\$ 20,548	78	1.3%	-0.5%
Cashiers	41-2011	6,734	6,668	6,711	\$ 15,402	66	1.0%	0.1%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	37-2011	3,390	3,326	3,463	\$ 18,462	64	1.9%	-0.4%
Combined Food Preparation and Serving Workers, Including Fast Food	35-3021	3,353	3,308	2,944	\$ 13,867	45	1.4%	2.6%
Bus Drivers, School	53-3022	1,390	1,347	1,087	\$ 22,091	43	3.2%	5.0%
Preschool Teachers, Except Special Education	25-2011	563	525	417	\$ 20,687	37	7.1%	6.1%
Electricians	47-2111	736	703	766	\$ 39,601	33	4.7%	-0.8%
Cooks, Restaurant	35-2014	1,214	1,181	1,211	\$ 18,062	33	2.8%	0.0%
Stock Clerks and Order Fillers	43-5081	2,706	2,676	2,881	\$ 19,391	30	1.1%	-1.2%
Machinists	51-4041	1,698	1,672	1,647	\$ 30,581	26	1.6%	0.6%
Security Guards	33-9032	1,025	1,000	1,070	\$ 20,320	26	2.6%	-0.8%
Telemarketers	41-9041	747	722	717	\$ 20,478	25	3.5%	0.8%
Executive Secretaries and Administrative Assistants	43-6011	2,290	2,265	2,115	\$ 31,956	25	1.1%	1.6%
Plumbers, Pipefitters, and Steamfitters	47-2152	521	496	548	\$ 39,242	25	5.0%	-1.0%
Telecommunications Equipment Installers and Repairers, Except Line Installers	49-2022	286	261	270	\$ 43,871	25	9.4%	1.1%
Amusement and Recreation Attendants	39-3091	311	289	241	\$ 14,803	23	7.8%	5.2%
Office Clerks, General	43-9061	4,396	4,374	4,137	\$ 21,282	22	0.5%	1.2%
Painters, Construction and Maintenance	47-2141	300	280	266	\$ 30,078	20	7.1%	2.4%
Landscaping and Groundskeeping Workers	37-3011	1,039	1,019	1,113	\$ 19,571	20	1.9%	-1.4%

The table above identifies the most prevalent occupations that are in demand for the industries in the region that are showing the largest employment growth.

## Forecast Occupation Gaps

**Bureau of Economic Analysis Region 52 Gaps in Top 20 Occupations (Requiring 2-Year Degree or Greater) Over Next 7 Years**

Occupation Description	SOC	Annual Occupation Gaps	Employment			Annual Aver Wages 2007 Q4
			2007 Q4	2006 Q4	2002 Q4	
Registered Nurses	29-1111	157	4,715	4,762	4,408	\$ 48,105
Elementary School Teachers, Except Special Education	25-2021	54	1,413	1,415	1,636	\$ 40,690
Licensed Practical and Licensed Vocational Nurses	29-2061	53	1,519	1,537	1,440	\$ 31,178
Correctional Officers and Jailers	33-3012	39	420	435	418	\$ 32,503
Executive Secretaries and Administrative Assistants	43-6011	38	2,290	2,265	2,115	\$ 31,956
Bookkeeping, Accounting, and Auditing Clerks	43-3031	35	2,226	2,234	2,186	\$ 26,305
Child, Family, and School Social Workers	21-1021	34	999	983	740	\$ 29,965
Secondary School Teachers, Except Special and Vocational Education	25-2031	34	1,176	1,179	1,370	\$ 43,233
Social and Human Service Assistants	21-1093	33	883	881	700	\$ 21,733
Business Operations Specialists, All Other	13-1199	26	1,297	1,285	1,250	\$ 47,963
Accountants and Auditors	13-2011	26	1,048	1,115	1,080	\$ 49,396
First-Line Supervisors/Managers of Office and Administrative Support Workers	43-1011	24	2,171	2,163	2,105	\$ 38,169
Medical Assistants	31-9092	23	722	710	628	\$ 22,697
Mental Health Counselors	21-1014	23	600	627	618	\$ 29,060
Recreation Workers	39-9032	18	497	495	422	\$ 18,631
Middle School Teachers, Except Special and Vocational Education	25-2022	18	500	501	582	\$ 41,546
Police and Sheriff's Patrol Officers	33-3051	18	747	753	741	\$ 41,239
Teacher Assistants	25-9041	18	1,214	1,195	1,212	\$ 18,186
Insurance Sales Agents	41-3021	17	455	485	428	\$ 48,713
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific	41-4012	15	1,757	1,790	1,774	\$ 47,682

The **Gap** forecasts the average annual number of individuals needed in the occupation beyond the supply of new workers. It includes changes due to replacements. For example, consider the case in which a retail salesperson gets a degree, leaves their occupation, and becomes a financial analyst. This turnover dictates that a new retail salesperson is needed. Even though the total number of retail salespersons in the region is unchanged, the gap counts this situation as an increase of one in demand for retail salesperson. It also includes expected changes due to worker preferences and wages.

This table provides insight into the occupations that typically require a 2-year degree or greater that are expected to be in greatest demand.

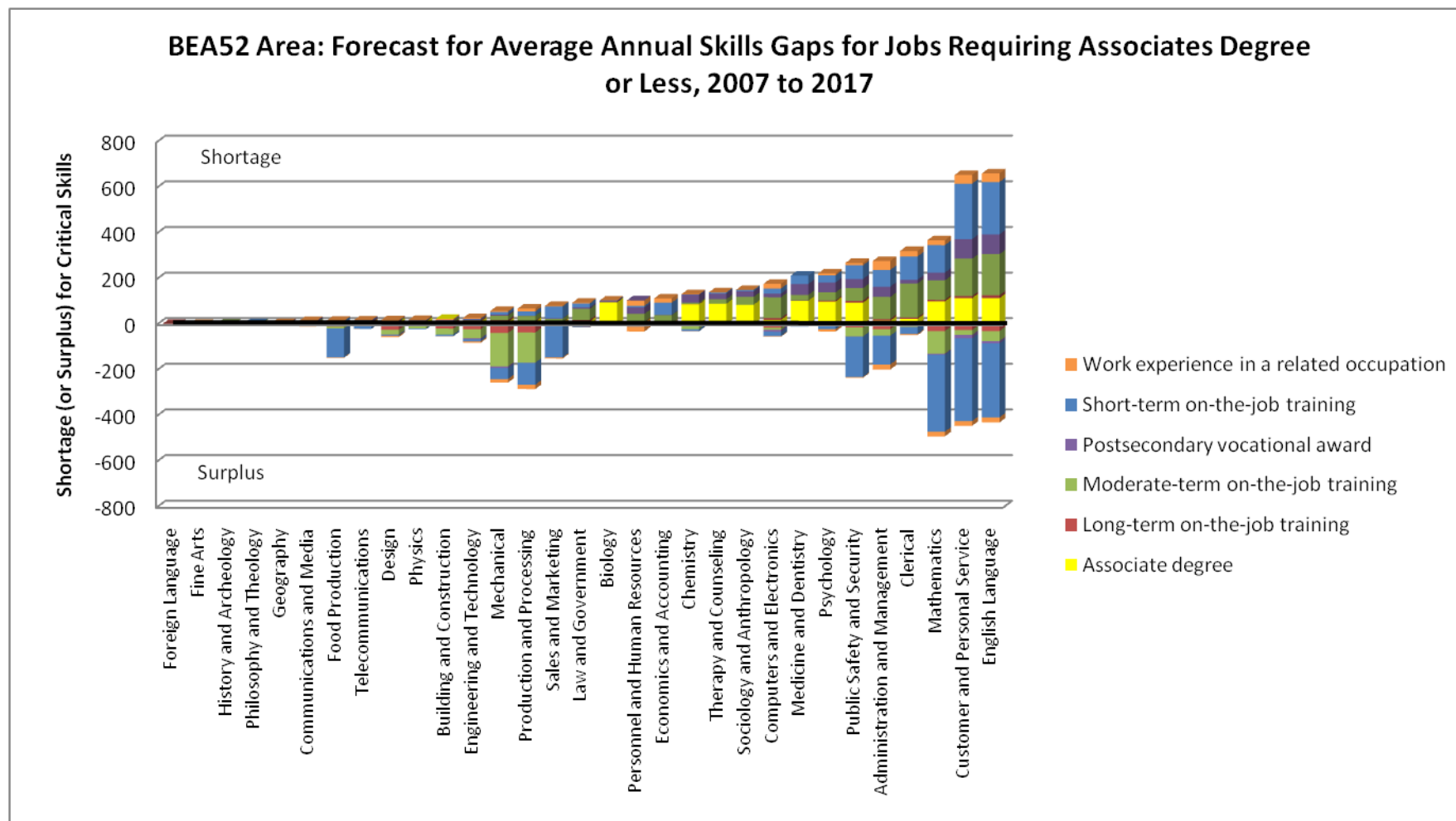


## Bureau of Economic Analysis Region 52 Gaps in Top 20 Occupations (Requiring Less than 2-Year Degree) Over Next 7 Years

SOC	Occupation Description	Annual Occupation Gaps	Employment			Annual Aver Wages 2007 Q4
			2007 Q4	2006 Q4	2002 Q4	
43-9061	Office Clerks, General	72	4,396	4,374	4,137	\$ 21,282
31-1011	Home Health Aides	58	1,200	1,181	934	\$ 16,884
41-2031	Retail Salespersons	45	6,330	6,251	6,484	\$ 20,548
39-9021	Personal and Home Care Aides	40	1,229	1,217	1,136	\$ 16,257
43-6014	Secretaries, Except Legal, Medical, and Executive	33	3,425	3,426	3,284	\$ 23,965
43-4051	Customer Service Representatives	28	2,595	2,625	2,735	\$ 25,555
43-3071	Tellers	24	797	799	815	\$ 19,217
43-4171	Receptionists and Information Clerks	23	1,840	1,834	1,704	\$ 20,307
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	21	179	195	186	\$ 21,374
33-9032	Security Guards	19	1,025	1,000	1,070	\$ 20,320
43-6013	Medical Secretaries	11	559	555	504	\$ 24,705
41-1011	First-Line Supervisors/Managers of Retail Sales Workers	10	1,880	1,874	1,917	\$ 33,264
53-3033	Truck Drivers, Light or Delivery Services	9	1,552	1,583	1,510	\$ 22,118
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	8	3,390	3,326	3,463	\$ 18,462
45-4022	Logging Equipment Operators	8	70	69	53	\$ 24,400
29-2052	Pharmacy Technicians	8	397	398	408	\$ 22,310
31-9095	Pharmacy Aides	7	135	138	136	\$ 17,900
53-7063	Machine Feeders and Offbearers	7	397	414	444	\$ 20,792
29-2041	Emergency Medical Technicians and Paramedics	6	446	446	454	\$ 25,254
41-2021	Counter and Rental Clerks	6	668	717	731	\$ 19,487

This table provides insight into the occupations that typically require less than a 2-year degree that are expected to be in greatest demand.

## Forecast Skill Needs



The chart above identifies the skills needed for the gap occupations identified on the previous page that typically require less than a 2-year degree.

## Appendix: Clusters

Cluster charts display a geographic concentration of interrelated industries or occupations.

- **Cluster**
  - Industry clusters can form and grow because of a region's competitive advantage—resources such as location, trained labor, and education systems.
  - Occupation clusters describe the specialization of a region's workforce.
- **Location Quotient - (LQ)** This value is shown by the size of the circle; the larger the circle, the larger the location quotient.
  - A location quotient greater than 1.0 indicates that the region has a higher concentration of employment in a particular industry or occupation than the nation; a location quotient less than 1 indicates the region has a lower concentration of employment in the cluster than the nation.
  - If a regional industry group has a location quotient of 1.25 or higher, it is considered to possess a *Competitive Advantage* in that industry.
  - Only industries or occupations with an LQ higher than .5 are shown in the clusters chart.
  - Nondisclosure - if cluster data are nondisclosable, a range will be given for the LQ.
- **Average Wages** - This value is shown on the vertical axis. The higher the circle is shown on the chart, the higher the average wages in that cluster.
- **Forecast Growth** - The forecast growth rate for a cluster is the annual average percentage change in employment expected over the given period. This value is shown along the horizontal axis. The further to the right a cluster's circle is shown, the greater the growth expected in that cluster. The expected growth is based upon a long-range national industry and occupation forecast and may not reflect short-term and regional fluctuations.